

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference METR-005-PCT	FOR FURTHER ACTION See Form PCT/PEA/416	
International application No. PCT/EP2004/011540	International filing date (day/month/year) 14.10.2004	Priority date (day/month/year) 15.10.2003
International Patent Classification (IPC) or national classification and IPC G05B19/401		
Applicant METRIS N.V. ET AL.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input checked="" type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand 12.08.2005	Date of completion of this report 14.02.2006	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Cîrîc, G Telephone No. +31 70 340-1958 	

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International application No.
PCT/EP2004/011540

Box No.	Basis of the report
1	1. Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-16 filed with the demand

Claims, Numbers

1-30 filed with the demand

Drawings, Sheets

1/3-3/3 filed with the demand

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-30
	No: Claims	
Inventive step (IS)	Yes: Claims	1-30
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-30
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V

- 1** Reference is made to the following documents (D):

D1: WO 02/44650 A (XYGENT LTD) 6 June 2002 (2002-06-06)

D2: US 2002/114537 A1 (SUTULA DANIEL P) 22 August 2002 (2002-08-22)

- 2** The subject-matter of claims 1 - 30 fulfills the requirements of Article 33(2) and (3) PCT with regard to novelty and inventive step for the following reasons:

2.1 for independent claims 1, 19 and 28

- (i) Document D1 relates to a method and apparatus for the development and evaluation of measurement programs (macros) used by a real measurement system (*see D1, abstract and the comments given under "Summary of the invention"*). This is different from the present application which relates to a method for evaluating a physical object and not evaluating a macro.

Furthermore, the protocols of evaluating a macro are different from those of evaluating a physical object. Macro evaluation would necessitate testing every measurement sub-routine, including routines superfluous to measuring the object, such as calibration. This is contrary to the protocols of claim 1 where operations only pertinent to measuring the physical object are performed.

In view of these differences, the subject-matter of claim 1 is novel over the prior art D1 (Article 33(2) PCT).

- (ii) Claim 1 solves the problem of an efficient evaluation of a physical object using a macro without the need for the presence of the object or CMM device. D1 does not anywhere hint or suggest towards the features as set out above and since there are straightforward advantages associated therewith, it is considered that the subject-matter of claim 1 involves an inventive step and satisfies the criterion set forth in Article 33(3) PCT.

2.2 for independent claims 19 and 28

The apparatus defined in independent claim 28 provides means suitable to perform the method steps of claim 1, whereas independent claim 19 refers to a computer program which is suitable to be implemented on a computing device in order to perform a method as described in claim 1.

Therefore the same reasoning given under 2.1 can also be applied for claims 19 and 28.

2.3 for independent claims 17 and 18

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- (i) Document D2 provides a method for creating a new virtual object based on information of a physical object to which it needs to be assembled. It does not disclose the measurement of the physical object using its virtual representation as in aforementioned claims of the present application. D2 uses a cloud of points that virtually represent at least a part of an object in order to create a CAD model (*as given in paragraphs [0023] - [0025]*) and not for measurement. Specifically, D2 mentions a "Virtual Protactor" (*see paragraph [0057]*). This is different from the virtual measurement used in claims 17 and 18.
- (ii) However, clarity objections are raised as to what extent claims 17 and 18 define all the essential technical features, necessary for the skilled person to put in practice the intended objective (here: virtual measurement of an object). This is further dealt with under Section VIII, below.

2.4 for dependent claims 2 - 16, 20 - 27, 29 and 30

Claims 2 - 16, 20 - 27, 29 and 30 are dependent on claims 1, 19 and 28 respectively and therefore also meet the requirements of PCT with respect to novelty and inventive step.

3 INDUSTRIAL APPLICABILITY

The current application refers to a method, device and computer program for evaluating a physical object. An industrial applicability is therefore provided.

Re Item VII

- 1 Independent claims 1, 17, 18 and 28 are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art being placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).
- 2 A document reflecting the prior art described on pages 1 - 2 is not identified in the description (Rule 5.1(a)(ii) PCT).
- 3 The features of the claims are not provided with reference signs placed in parantheses (Rule 6.2(b) PCT).

Re Item VIII

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The present application does not meet the requirements of Article 6 PCT, because claims 1, 17 and 18 are not clear.

- 1 Although claims 1, 17 and 18 have been drafted as separate independent method claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness.
Moreover, lack of clarity of the claims makes it difficult, if not impossible, to determine the matter for which protection is sought and places an undue burden on others seeking to establish the extent of the protection.
- 2 Claims 17 and 18 do not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The claims attempt to define the subject-matter merely in terms of the result to be achieved, without providing all the technical features necessary for achieving this result. It appears that a formulation of these 2 claims as dependent on method claim 1 would have been appropriate.

Hence, claims 1, 17 and 18 do not meet the requirements of Article 6 PCT.